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May 16, 1997

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Federal and Herbird and Sission Office of Securitary

William F. Caton, Acting Secretary Federal Communications Commission 1919 M Street, N.W., Room 222 Washington, D.C. 20554

Re:

CellNet Data Systems, Inc. WT Docket No. 97-81

Dear Mr. Caton:

Please find enclosed, on behalf of CellNet Data Systems, Inc., an original and four copies of its Reply Comments in the above-referenced proceeding.

Should you have any questions regarding this submission, please contact the undersigned.

Sincerely,

WILKINSON, BARKER KNAUER & QUINN

By:

zwrence J. Movshin Jeffrey S. Cohen

Enclosures

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BEFORE THE

Federal Communications Commission

Washington, DC 20554

MAY 1 6 1997

In the Matter of	j	Chicago Sac My	ision
Amendment of the Commission's Rules Regarding Multiple Address Systems)) WT Docket No. 97-81)	,	

REPLY COMMENTS OF CELLNET DATA SYSTEMS, INC.

CELLNET DATA SYSTEMS, INC.

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SUMMARY

The comments filed in this proceeding demonstrate that the MAS community has reached a broad consensus on many major issues raised in the *NPRM*. In addition, there is little interest from other parties for major changes to the rules, and no suggestion of a need for these channels to meet demands for new, ubiquitous commercial service offerings to subscribers.

The consensus developed shows that the 928/952/956 MHz bands (the "Private MAS Bands") should be reserved for private uses, including private carrier offerings serving the internal needs of private entities; that the existing site-by-site licensing scheme should be retained, since the use of geographic service areas would be inconsistent with current uses of the band; and that specific measures, such as establishment of a finder's preference program, should be implemented in order to police the spectrum of unconstructed or non-operating stations and relieve spectrum congestion.

There was also broad consensus favoring grandfathering of existing operations and providing incumbents with protected service areas. There is no basis for requiring the relocation of any existing licensees, even subscriber-based service providers, in the MAS Bands.

The consensus of commenters favored granting incumbents a protected service area based on the existing co-channel separation criteria, *i.e.*, up to 45 miles from their licensed location. And, as some commenters have noted, incumbents should also be afforded transitional flexibility to expand current operations to accommodate growth for currently planned, but unconstructed systems. Most commenters have also agreed that primary mobile services should not be allowed. However, consistent with supporting increased flexibility, CellNet believes that mobile operations can be permitted, if such services are not interconnected with the public

switched telephone network, and are offered only on an ancillary, secondary basis to primary fixed operations.

With respect to the 932/941 MHz bands, there is clearly strong opposition to the auctioning of these channels. Further, many commenters who have interests in the Private MAS Bands have expressed a desire that some channels in the 932/941 MHz bands should be reserved for private use only. While CellNet believes that strict enforcement of construction requirements, including the adoption of a finder's preference program, will make more channels available and ease current congestion in the Private MAS Bands, the Commission should consider reserving, but not yet assigning, some of the channels in the 932/941 MHz bands. With this approach, as the MAS market develops, the Commission can revisit the appropriate split between private and subscriber based system requirements and allocate the channels on a more informed basis to meet the future needs for this distinct spectrum allocation.

Federal Communications Commission

In the Matter of)
Amendment of the Commission's Rules Regarding Multiple Address Systems) WT Docket No. 97-81

To: The Commission

REPLY COMMENTS OF

CELLNET DATA SYSTEMS, INC.

CellNet Data Systems, Inc. ("CellNet"), by its attorneys, and pursuant to Section 1.415 of the Commission's Rules, hereby replies to the comments filed by interested parties on the Commission's Notice of Proposed Rule Making (FCC 97-58, released Feb. 27, 1997) (the "NPRM") in the above-referenced proceeding. More than 30 substantive comments were filed on the Commission's proposal to substantially revise and restructure the rules governing the use of the 900 MHZ band for Multiple Address Systems ("MAS"). While there are a few points with which CellNet disagrees, there is, as demonstrated below, a broad consensus within the MAS community with respect to the future licensing and use of this private radio spectrum. This consensus should form the basis for an expeditious conclusion to this proceeding, and the future use of these types of systems for a wide variety of very valuable services and facilities.

I. INTRODUCTION

In its comments on the NPRM, CellNet highlighted several key positions which would, if adopted, assure the effective, spectrally efficient use of all of the spectrum currently allocated primarily for MAS licensees operating under Part 101 of the Rules. In particular, CellNet opposed the Commission's proposal to allocate the 928/952/956 MHz bands (the "Private MAS Bands") exclusively for private internal MAS operations, and instead urged the Commission either to maintain the status quo with respect to current licensing rules for the Private MAS Bands or to permit the use of the bands for private carrier services in addition to purely private internal operations, to the extent that such services are offered to satisfy the internal MAS communications needs of the private carrier's customers. Significantly, CellNet urged the adoption of an expedited "finder's preference" program, which would stimulate the self-policing of MAS licenses, and increase the availability of many licensed but unused channels in order to meet actual requirements.

CellNet agreed with the Commission's proposal to fully grandfather all incumbent operations and uses. In addition, CellNet urged that incumbents that may not be entitled to obtain additional licenses in any MAS spectrum should be provided a transition period in which to expand existing operating areas or add additional frequencies to existing stations to meet planned growth requirements. CellNet also argued that incumbents located within a geographic area should be afforded a 45-mile protected service area, to mirror the current 90-mile separation for fixed MAS stations.

As CellNet noted, site-by-site licensing procedures should be retained for the Private MAS Bands not subject to auction. Unencumbered channels may, however, be awarded on a geographic area basis in order to permit maximum flexibility for the development of new products and services.

CellNet was generally supportive of greater operational and technical flexibility for the MAS bands. However, CellNet opposed permitting point-to-point operations in the well-established point-to-multipoint Private MAS Bands, while CellNet supported permitting mobile operations in the MAS bands only to the extent that such services are not interconnected with the public switched network. Finally, CellNet urged the Commission to lift the current application freeze as expeditiously as possible in order to avoid disruption to current business plans.

II. REPLY COMMENTS

A. There Is Broad-Scale Interest in this Proceeding from the MAS Community;
Those Who Would Significantly Modify the Nature of the Systems Being
Developed on this Spectrum Have Shown Little Interest in this Spectrum.

As an initial matter, it cannot go unrecognized by the FCC in considering action in this proceeding that the comments in this proceeding are virtually all from entities (or associations representing entities) who are authorized MAS licensees. Particularly as to issues dealing with the Private MAS Bands, all of the commenters were licensees, manufacturers or service providers who actively utilize MAS frequencies. By the same token, this proceeding has not generated significant participation from entrepreneurs, financing interests or organizations interested in creating common carrier, or commercial, ubiquitous subscriber-based services on these channels. In short, the vast majority of the commenters want to keep these MAS channels for the private radio purposes for which they were originally intended.¹

To the extent that members of the Paging industry have commented that the original rules for the 932/941 MHz bands should be preserved, such a position is reflective of the position CellNet (with a consensus of commenters) has taken with regard to the Private MAS Bands. Thus, CellNet supports the paging community as to their desire to maintain the status quo in the 932/941 MHz bands.

That this proceeding has engendered so little interest from CMRS-type interests is not surprising to CellNet, since the Private MAS Bands, at least, are heavily utilized for the types of MAS networks that the Commission has long envisioned in setting aside channels for narrowband point-to-multipoint systems. Moreover, the fact that a consensus on most of the critical issues has developed from those who are truly interested in developing this spectrum should not be lost on the Commission in determining final rules in this proceeding.

B. There Is a Broad Consensus on Most of the Critical Issues Relating to the Private MAS Bands.

Notwithstanding that the commenters discussing the Private MAS Bands represent a wide diversity of interests, there has developed a clear consensus among this broad group of parties on many of the key issues raised in the *NPRM*. This consensus should provide the basis for final regulations in this proceeding:

Permitted Uses of the Private MAS Bands

The overwhelming majority of commenters urged the reservation of the Private MAS

Bands for private internal uses as necessary to satisfy the demand for such private networks by
large users like the nation's utility and transportation industries.² Of greatest interest to CellNet,
many of those commenting on this subject joined CellNet in recognizing that private carrier
offerings designed to serve such private internal requirements <u>must</u> be included within the uses

Many parties agree with CellNet that MAS licensees who use their private internal systems as a backhaul means to collect data, and then make this information available to their customers, should be included in the population of "private internal users." Although such uses involve differing applications, whether by providing remote meter reading services, alarm services, lottery services, etc., in CellNet's, and many other parties' views (see, e.g., Comments of the Cooperative Power Association ("Cooperative Power") at p. 2; Comments of GPM at pp. 2-3; Comments of GTECH Corporation ("GTECH") at pp. 1-2; Comments of Itron at 1; Comments of Radscan at pp. 1-2) they are all similar in terms of being classified as private internal uses.

permitted in such reserved spectrum.³ UTC, for example, noted that "[a] number of utilities have partnered with equipment manufacturers and other service providers to deployed [sic] advanced meter reading systems. Such private carrier arrangements are not 'subscriber-based' communications services, as these systems are designed and deployed primarily to meet the utility's specialized metering requirements,"⁴ while Radscan, Inc. also noted that "given the present mixed use of the [928/952/956 MHz] bands it makes little sense to restrict these bands exclusively to private use."⁵

None of the utilities commenting denied that their needs for the types of services and facilities offered over the MAS bands by service providers like CellNet would decline; to the contrary, many such entities recognized that companies like CellNet, Radscan, Inc., GTECH Corporation, and Itron, Inc. are able to use their licensed capacity to provide private carrier services which augment the private internal communications needs of other private internal MAS licensees.⁶ The consensus is clearly that such uses should continue to be permitted in the Private

See Comments of GPM Gas Corporation ("GPM") at pp. 6-7; Comments of Itron, Inc. ("Itron") at pp. 5-6; Comments of Radscan, Inc. ("Radscan") at pp. 5-15.

Comments of UTC at p. 16 n. 19.

⁵ Comments of Radscan at p. 5.

See Comments of the American Water Works Association ("AWWA") at p. 11 ("Many entities, such as central alarm and vending machine monitoring companies, which use this spectrum as an integral part of their end product are licensed as private internal users. . . . These entities are selling a service incorporating the use of radio rather than selling radio service itself and should be appropriately considered private carriers."); Comments of Alligator Communications, Inc. ("Alligator") at p. 2 ("In this age of 'Corporate Outsizing', it is noteworthy that many Utilities are currently retaining contractors to License, Install, and Operate MAS, to perform certain specific functions, entirely within, and for the exclusive use of, the Utility. In reality, the use of the License, and of the MAS spectrum, is solely for 'internal use', and is inappropriately labeled 'subscriber-based service.").

MAS Bands. Equally significant, as several commenters noted,⁷ the few attempts by commercial entities to establish broad-based, commercial subscriber-based services in the bands simply have not succeeded -- clearly demonstrating that these bands are much better suited for satisfying private internal communications needs, either directly or through private carrier offerings.

<u>Licensing Methods</u>

Due to the particular nature of the purposes for which MAS networks are utilized in the Private MAS Bands, most commenters agreed with CellNet that the best spectrum management plan to achieve the goal of efficient spectrum utilization and rapid service deployment is to retain the <u>status quo</u>, i.e., site-by-site licensing, accompanied by strict and enforceable construction requirements. Should the Commission determine to implement a geographic licensing scheme in the Private MAS Bands, there was also general consensus that mutually exclusive applications should not be resolved through competitive bidding, but rather by the lottery mechanism already in place for these channels.⁸

Most commenters agreed with CellNet that the competitive bidding alternative suggested by the Commission would not accomplish the Commission's goals; to the contrary, by auctioning off geographic areas unsuitable for the type of uses made of the Private MAS Bands, many years would be needed by licensees for the development of new or different services than those that can be achieved more quickly and efficiently under the current licensing scheme. The

See Comments of the American Petroleum Institute ("API"), at p. 28; Comments of GPM at 4; Comments of Microwave Data Systems ("MDS") at p. 4.

See Comments of API at p. 9, n. 6; Comments of AWWA at p. 21; Comments of Burlington Northern and Santa Fe Railway Company at pp. 6-7; Comments of Colorado Interstate Gas Company at p. 2; Comments of Itron at pp. 6-7.

There were numerous smaller entities who submitted comments on the issue of (continued...)

Commission's staff have often reiterated that the purpose of competitive bidding is to ensure the rapid introduction of service to the public, and not merely to raise money for the public coffers.

This objective is not well served in this instance. 10

Finder's Preference Program

Many commenters independently proposed the adoption of measures to more strictly enforce construction requirements.¹¹ Commenters pointed out that there are spectrum warehousers and unconstructed stations within the Private MAS Bands, and these same commenters have also pointed out that the MAS spectrum is very congested and completely unavailable in the larger markets. Some commenters joined CellNet in urging the adoption of a finder's preference program.¹² Although there are some differences of opinion as to the shape that such rules would take (CellNet advocated a more streamlined approach), the consensus is that a finder's preference program would be very beneficial as an ideal solution for many of the

^{9 (...}continued)

licensing the 932/941 MHz bands. Although many of these commenters, or the 50,000 applicants for these bands generally, may have intended to provide subscriber-based services, the same arguments made above for resolving mutual exclusivity by lottery rather than auctions applies here also. Given a finder's preference program and strict construction requirements in the 932/941 MHz bands, service would be introduced more rapidly to the public, and potential spectrum warehousers or speculators would be quickly found and removed.

See Comments of Comsearch at pp. 4-5; Comments of Cooperative Power at p. 4-5; Comments of MDS at pp. 8-9.

See Comments of Black & Associates at p. 5 ("up to 15% of the licenses in the 928/952 MHz band are for speculative subscriber based services. It is probably fair to say that a large percentage of these licenses are not constructed in accordance with the Rules and Regulations and many have not been since 1993. Also, it is estimated that another 25% of non-subscriber based licenses are warehoused or no longer actively used."); Comments of GPM at p. 5; Comments of GTECH at pp. 8-10.

See Comments of Black & Associates at p. 5; Comments of GTECH at pp. 8-9.

spectrum congestion problems, while rewarding those entities willing to spend the resources to identify underutilized spectrum which can be repossessed to reduce such problems.¹³

C. All Incumbent Licensees Should Be Grandfathered and Protected Within a Designated Service Area

There was substantial agreement among the commenting parties that incumbent licensees should be allowed to continue to operate under their existing authorizations, without regard to any changes in the licensing scheme, or permitted uses, that are made to the spectrum authorization for the MAS channels. Those commenting favored protection for incumbents whether the existing licensees were operating in the Private MAS Bands that may be restricted for internal use, or in any other MAS bands that are subjected to competitive bidding and geographic area licensing.¹⁴

Very few commenters urged that existing licensees who are providing "subscriber based services" should be required to relocate out of the Private MAS Bands. CellNet strongly opposes such a position. As a practical matter, many commenters have noted that the number of commercial "subscriber based" service offerings currently operating in the band is extremely small; there has simply not been a viable market for commercial, subscriber-based MAS services, and those few who have tried have generally failed. Therefore, the number of channels that would be recovered would be extremely small. More importantly, equity dictates that even

¹³ *Id*.

See Comments of Affiliated American Railroads ("AAR") at pp. 5-7; Comments of API at p. 9 n. 5; Comments of Baltimore Gas and Electric Company at p. 2; Comments of Bristol Babcock Inc. at p. 3; Comments of Delmarva Power and Light Company ("Delmarva Power") at pp. 6-7; Comments of GTECH at pp. 6-7; Comments of MDS at p. 7; Comments of Radscan at pp. 15-18; Comments of Wells Rural Electric Company at p. 4.

See Comments of AWWA at p. 6; Comments of Comsearch at p. 3.

if certain current uses will not be licensed in the future, all current licensees who obtained their authorizations under existing rules and whose operations were developed in accordance with the rules in place at the time should be grandfathered indefinitely and provided with a protected service area. It would be entirely unfair — and indeed, unnecessary — to place the enormous burden of moving to new frequencies on such incumbents when there is no compelling reason to do so.

Many parties also commented on the size of the protected service area that should be granted to incumbent licensees. Like CellNet, most opposed the tentative conclusion in the NPRM to limit incumbents to a 25-mile protected area. Also like CellNet, some parties noted that the more appropriate distance should be based on the protection afforded fixed-to-fixed stations, and not the fixed-to-mobile protection criteria. To that end, the consensus of those commenting is that incumbent licensees should be afforded a protected service area of up to 45 miles.

CellNet is pleased to note that other commenters also recognized the need to grant incumbents some level of flexibility in continuing to develop on a planned and orderly basis

See Comments of AAR at p. 6; Comments of Alligator at pp. 2-3; Comments of AWWA at p. 15; Comments of Black & Associates at pp. 7-8; Comments of ProNet Inc. ("ProNet") at pp. 8-10; Comments of Washington Suburban Sanitary Commission ("WSSC") at p. 8.

See Comments of Black & Associates at p. 8; Comments of Delmarva at p. 6; Comments of GTECH at p. 7; Comments of MDS at p. 11; Comments of ProNet at p. 9.

A number of commenters proposed various technical alternatives for measuring "interference" at this protection distance. Given the lack of consensus on this issue, CellNet would urge that the Commission use the standard generally specified by the FCC on CellNet's licenses: the power flux density produced by any remote station in the proposed system will not exceed -99.1 dB(W/m²) at or beyond 45 miles from the center of the service area specified on the authorization.

those wide area systems whose initial phases have already been licensed. For example, the Affiliated American Railroads urged that the FCC "should allow for expansion of MAS links into new geographic areas to accompany the expansion of the underlying infrastructure that is supported by the MAS systems." As CellNet noted in its comments, there is clearly a need to allow for some transitional period during which systems already in development can continue to grow beyond their protected service area to complete long-term plans initiated prior to the rule changes. CellNet therefore reiterates its proposal to allow incumbents a two-year period after the adoption of the new licensing scheme to obtain licenses for additional channels so long as the licensed facilities is located within ninety miles, *i.e.*, one full "system" away, from the existing licensed facilities.

D. The Commission Should Reserve Some Part of the 932/941 MHz Bands to Accommodate the Future Requirements for Private, Internal and Private Carrier Systems.

There is little support in the record for the Commission's proposal to subject the 932/941 MHz bands (the "Open MAS Bands") to competitive bidding. Indeed, the NPRM's premise for engaging in competitive bidding, i.e., that the vast majority of proposed uses by those applicants filing for the channels would be for "subscriber based" offerings, is questioned by virtually all of the parties with applications pending for those channels who have commented in this matter as well as by the various large utilities and other private users who have studied those

¹⁹

applications.²⁰ The record is therefore clearly lacking for pursuing the proposed competitive bidding scheme for these channels.

Of more concern to CellNet is the recognition by many commenters who are currently licensed in the Private MAS Bands that even these bands will not satisfy the long-term need for private systems. Indeed, noting the substantial congestion in these channels, many of the utilities parties have called for the Commission also to set aside a number of channels in the 932/941 MHz bands for exclusive private use.

CellNet believes that strict enforcement of construction requirements already imposed in the Private MAS Bands and the implementation of an effective, expedited finder's preference program will relieve many of the congestion problems in the Private MAS Bands, allowing the Commission to maintain the *status quo* licensing scheme for these bands. CellNet also agrees that future demand for MAS spectrum to meet private, internal requirements justifies reserving some portion of the Open MAS Bands for such private internal requirements rather than auctioning off the entire band for what is likely to be predominantly speculative uses.

However, CellNet does not believe that the public interest would be well-served by immediately opening the band for licensing, even for strictly private, internal uses. Indeed, the lessons learned when the band was last opened for such uses — with an overwhelming number of speculative applicants filing for the band on a mutually exclusive basis — suggests that there is a need to retain some MAS spectrum in reserve to meet future requirements for such systems. It remains uncertain as to how viable commercial, subscriber-based services will be in the MAS

See Joint Comments of AirTouch Paging and Arch Communications Group at pp. 2-4; Comments of API at pp. 11-22; Comments of AWWA at p. 8; Comments of GPM at p. 6; Comments of ProNet at pp. 2-5; Comments of UTC at pp. 18-26; Comments of WSSC at p. 4.

bands, and whether any such offerings can meet some of the requirements for MAS services that are currently met by private internal systems. It is also unclear whether some of the existing congestion may be relieved in the Private MAS Bands as a result of implementation of new rules promoting efficient use, including a more aggressive enforcement of existing construction and operating requirements.

CellNet therefore believes that the Commission can manage the 932/941 MHz bands best by holding a number of channels in this band in reserve, rather than auctioning the whole band or setting aside a certain number of channels for immediate licensing for private use. In this way, the marketplace for MAS services can mature, and dictate the types of equipment and services which will be developed on these channels. At the conclusion of the reserved period, the Commission could evaluate how the spectrum is being used and then make the appropriate allocation.

E. Some Mobile Operations Should Be Allowed on the MAS Bands.

In response to the FCC's proposal to lift some of the restrictions on the use of the MAS channels, and in particular, on the issue of permitting mobile operations in these bands, most commenters, including CellNet, expressed concern regarding the negative effect mobile operations would have on existing MAS fixed operations. Indeed, many parties commenting on this issue urged that mobile operations should not be allowed on these channels.²¹ The

See Comments of Black & Associates at p. 3; Comments of GPM at pp. 7-8; Comments of GTECH at pp. 7-8; Comments of MDS at p. 12; Comments of UTC at p. 27; Comments of WSSC at p. 10. Further, as GPM and MDS noted, the amount of spectrum that is available for mobile operations is now overwhelming, as evidenced by the decreasing prices for such spectrum in recent auctions for SMR and PCS spectrum.

comments make clear that there is no overwhelming need to allow the primary use of these channels for mobile operations.

On the other hand, CellNet generally supports the FCC's initiative to permit flexible use of spectrum so long as such flexibility does not interfere with the primary nature of the allocation. In this regard, CellNet believes that mobile services can be permitted on the MAS bands, provided that mobile operations are not interconnected to the PSTN (and thus do not trigger additional CMRS regulation) and that such services are operated and offered only ancillary, and on a secondary basis, to the primary fixed operations of a licensee. In this way, mobile services would be limited to being only an adjunct to fixed uses, and could not be offered as an independent, widespread mobile service. Allowing such limited mobile operations will also avoid the need to determine, in specific cases, whether the remotes/end points of an MAS system were designed for fixed uses only, or could, in the future, also be available for limited mobile operations.

III. CONCLUSION

The message being conveyed by the degree of consensus reached by the Private MAS community is that with the adoption of rules which will enhance the enforcement of existing construction and operating requirements and expeditiously clear the spectrum of unconstructed stations and speculators, the MAS channels do not require any major regulatory overhauling. If anything, this rulemaking, including the application processing freeze, is inhibiting growth in these bands. The Commission can manage this spectrum better by leaving, for the most part, the present licensing scheme in place. CellNet therefore urges the Commission's expeditious conclusion to this rulemaking, in order that the operational and technical flexibility proposed herein can be implemented, while also allowing the MAS community to utilize these channels to

meet their critical communications requirements that are best served with point-to-multipoint communications networks.

Respectfully submitted,

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May 16, 1997

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